Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: Cherryl Kramer, 3316 S 72nd ST W, Billings, MT 59016

2. Type of action: Application for Beneficial Water Use Permit 43Q 30152396

3. Water source name: Groundwater

4. Location affected by project: Section 25, T1S, R24E, Yellowstone County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The Applicant proposes to divert groundwater from January 1 to December 31 for multiple domestic use and from April 1 to October 31 for lawn and garden use. Groundwater will be diverted by means of 10 wells approximately 45 feet deep, from January 1 to December 31 at a combined flow rate of 89 GPM (0.20 CFS) up to 24.61 AF, from multiple points of diversion in the E2SE Section 25, T1S, R24E, Yellowstone County. One well for aquifer testing has been drilled. The Applicant proposes a subdivision with 10 residential homes. The Applicant proposes 8.5 AC of lawn and garden irrigation. The place of use is generally located in E2SE Section 25, T1S, R24E, Yellowstone County approximately 5 miles northeast of Laurel, MT. The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)
Montana Department of Natural Resources and Conservation
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
United States National Resource Conservation Service
United States Fish and Wildlife Service
Montana Sage Grouse Habitat Conservation Program
Montana Natural Heritage Program

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity **–** The project would draw water from groundwater in the West Billings area. Based on aquifer test results the proposed project would create a cone of depression extending 9,100 feet from the wells. The aquifer flux through this region is greater than the current legal demands on the groundwater in the area. The appropriation of groundwater will deplete the stretch of the Danford Drain downstream of the western line of the southeast quarter of Section 25, T1S, R24E, Yellowstone County. Danford Drain is not listed by the Montana Department of Fish, Wildlife, and Parks as chronically or periodically dewatered stream. The source of supply is groundwater and is therefore not identified as dewatered by the Montana Department of Fish, Wildlife and Parks. Modeling by the Montana Department of Natural Resources and Conservation indicates groundwater supply in excess of all legal demands.

Determination: No Significant Impact

Water quality **-** The water appropriated would be returned to the aquifer through lawn and garden irrigation and through individual drainfields at each of the 10 residences. The water in the West Billings area has high dissolved constituents and is undesirable for drinking water (Olson and Reiten, 2002). Moreover, nitrate concentrations with isotopic signatures indicating manure and septic system sources are near or above recommended human health limits in many areas. Based on Department of Natural Resources and Conservation standards and analysis roughly 30% of appropriated water will return to the aquifer either by infiltration of irrigation water or through drainfields. The return of water from residential yards and drainfields has the potential to degrade groundwater quality. The Montana Department of Environmental Quality and the Yellowstone County Health Department monitor and regulate public water supply and drainfield installation. If water quality falls below health limits, treatment of the water supply would be needed.

Determination: Possible Significant Impact

Groundwater **-** This proposed project will divert 24.61 AF/YR of water from the alluvial aquifer of the Yellowstone River Valley. The amount of water available in the area exceeds legal demands on the aquifer based on analysis by Department of Natural Resources and Conservation hydrogeologists and drawdown from the well is acceptable. The appropriation will probably deplete surface water in the Danford Drain. The depletion to the surface water source is relatively minor (maximum of 27.86 GPM) and the source is not listed as chronically or periodically dewatered by the Montana Department of Fish, Wildlife, and Parks. The return of water to the aquifer through drainfields and infiltration of lawn and garden irrigation water has the potential to add dissolved constituents, fertilizer, and nitrates to the groundwater locally.

Determination: Possible Significant Impact

DIVERSION WORKS - The proposed wells will be drilled by a licensed Montana well driller and can be assumed to be properly constructed. The diversion will not create barriers or alter riparian environments or stream channels. The area in question has been in agricultural use and is not adjacent to any naturally occurring watercourse. The soils in the area are not unstable.

Determination: No Significant Impact

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - According to the Montana Natural Heritage Program there are no plant species of concern in the region possibly affected by this project. There are eleven animal species of concern in the area including the Townsend's Big-eared Bat, the Black-tailed Prairie Dog, the Hoary Bat, the Little Brown Myotis, the Long-legged Myotis, the Golden Eagle, the Great Blue Heron, the Snapping Turtle, the Plains Hog-nosed Snake, the Western Milksnake, and the Greater Short-horned Lizard. The Bald Eagle is a species of special status in the area. These species have habitat that include riparian forest, conifer forest, cliffs, caves, and large prairie rivers. The area of this project is currently agricultural with none of the appropriate habitat for listed species of concern. Based on mapping of Sage Grouse habitat by the Montana Sage Grouse Habitat Conservation Program, the project area is not in an area of Sage Grouse habitat.

Determination: No Significant Impact

Wetlands - The National Wetlands Inventory prepared by the United States Fish and Wildlife Service shows palustrine emergent wetlands and freshwater ponds to the southeast and northeast of the area potentially impacted by this project. Mapped wetlands are closely associated with surface water sources. Drawdown of the regional aquifer could impact the surface water sources and associated wetlands. There are no wetlands within the project area, and none are proposed.

Determination: Possible Minor Impact

Ponds - The proposed project does not involve ponds.

Determination: No Impact

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE – According to mapping by the United States Natural Resource Conservation Service, the dominant soil in the area is Kyle silty clay. This soil is well drained and very slightly saline to moderately saline. The slopes are uniformly low and very stable. Transition from irrigated agriculture to residential use may decrease the soil moisture.

Determination: No Significant Impact

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - The entire region has historically been used for agricultural use, so the general impact would be to alter the vegetation from agriculture to lawns and residential homes. No existing vegetation is critical to habitat. The construction equipment necessary for development may transport noxious weeds to the site. It will be the responsibility of the developer to monitor and control noxious weeds.

Determination: No Significant Impact

AIR QUALITY - The proposed project is for subdivision development of existing agricultural land. The switch from agriculture to residential would decrease dust associated with tilling and harvest and increase emissions associated with transportation, heating, and cooling.

Determination: No Significant Impact

HISTORICAL AND ARCHEOLOGICAL SITES - This project is not located on State or Federal land and this section is not applicable to the specific project.

Determination: Not Applicable

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - The proposed project would take acres out of agricultural production and use them for residential purposes. The amount of water required would decrease and energy consumption would change from running equipment related to agriculture to powering homes.

Determination: No Significant Impact

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - The project lies within Yellowstone County and would be subject to county zoning restrictions, subdivision review and public water and wastewater regulations. The proposed use is not inconsistent with county zoning.

Determination: No Impact

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - The project lies within a rapidly developing suburban area. There are no nearby wilderness areas or recreational sites and no changes to the transportation system are expected.

Determination: No Impact

HUMAN HEALTH - The project would have limited impact on public health. Dust may be reduced by abandoning farming and drinking water quality may be affected by residential drainfields.

Determination: No Significant Impact

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: Not Applicable

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No Significant Impact

(*b)* *Local and state tax base and tax revenues?* The county and state tax base would increase with the change from agricultural use to residential use. No Significant Impact.

(c) *Existing land uses?* No Significant Impact

(*d)* *Quantity and distribution of employment?* No Significant Impact

(e) *Distribution and density of population and housing?* The project would increase available housing in the area and generally increase the population density.

(f) *Demands for government services?* The new residential homes would increase demand for fire and police protection as well as snow removal and street maintenance.

(g) *Industrial and commercial activity?* No Significant Impact

(h) *Utilities?* The new residential homes would increase demand for electric, gas and telephone services.

(i) *Transportation?* The subdivision would generate additional traffic west of Shiloh Road.

(j) *Safety?* No Significant Impact

(k) *Other appropriate social and economic circumstances?* No Significant Impact

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: No secondary impacts associated with the proposed project are recognized.

Cumulative Impacts: There are no other pending permit applications in the area. The west Billings area is developing rapidly, and multiple subdivisions have been created in recent years. There are no known actions under concurrent consideration by any state agency in the vicinity of the project. The continued use of groundwater for residential subdivisions in the area west of Billings has potential for cumulative impact on water availability and quality. Traffic, utilities, and government services are additional cumulative impacts.

3. ***Describe any mitigation/stipulation measures:*** None

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to***

consider: The reasonable alternatives are to grant the beneficial water use permit or the no action alternative. The no action alternative prevents the Applicant from developing a residential subdivision and denies the economic benefit. The no action alternative has few significant advantages over the proposed project. Development in west Billings is inevitable and the no action alternative prevents needed housing.

PART III. Conclusion

1. Preferred Alternative: Issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

2 Comments and Responses: None

3. *Finding:*

*Yes___ No__**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action: Although potential impacts are recognized, an EA is the appropriate level of analysis because the Department of Natural Resources and Conservation is required to meet statutory timelines (MCA 35-2-307) in the processing of water right applications. Those timelines preclude the preparation of an Environmental Impact Statement.

Name of person(s) responsible for preparation of EA:

Name: Mark Elison
Title: Regional Manager
Date: 9/14/2021